

IN THE CLAIMS:

1. (Currently amended) An energy generating system comprising:

at least one front stage reaction means for receiving a raw material to generate and generating a reaction product by receiving mechanical power from outside the system in a first mode and producing mechanical power generated by chemical reaction for outputting to the outside in a second mode; and

a rear stage reaction means for receiving said reaction product to generate energy, ~~wherein~~

~~said front stage reaction means selectively generates said reaction product by receiving mechanical power from outside and outputs mechanical power generated by chemical reaction in said front stage reaction means to the outside~~

2. (Original) An energy generating system according to claim 1, wherein

at least one of said front stage reaction means receives said raw material and said mechanical power, and produces a reaction product having a chemical energy higher than a chemical energy of said raw material.

3. (Original) An energy generating system according to claim 1, wherein

at least one of said front stage reaction means produces a reaction product different from said raw material in combustive property.

4. (Cancelled)

5. (Original) An energy generating system according to claim 1, wherein

said front stage reaction means comprises an energy converting means for converting electric energy to mechanical power or mechanical power to electric energy.

6. (Original) An energy generating system according to claim 1, wherein said front stage reaction means and said rear reaction means are connected to each other through a heat transfer means.
7. (Original) An energy generating system according to claim 1, wherein said front stage reaction means is a heat engine, and said rear stage reaction means is a fuel battery.
8. (Original) An energy generating system according to claim 7, wherein said heat engine performs said front reaction in a steam atmosphere using water supplied from a water supply means.
9. (Original) An energy generating system according to claim 7, wherein said heat engine is an internal combustion engine, said internal combustion engine comprising a fuel injection valve, a reaction composition control means controlling an amount of fuel injected from said fuel injection valve.
10. (Original) An energy generating system according to claim 7, wherein said heat engine is an internal combustion engine, said internal combustion engine comprising a variable drive valve,

a reaction composition control means controlling a compression ratio of said internal combustion engine by changing opening-and-closing timings of said variable drive valve.

11. (Original) An energy generating system according to claim 7, wherein said heat engine has a time period to generate mechanical power, and said heat engine comprises a means for supplying compressed air to said fuel battery using said mechanical power.

12-15. (Cancelled)

16. (Previously amended) An energy generating system according to claim 7, further comprising a heating means for heating a raw material to be injected into said heat engine; and

a fuel selecting means between said heat engine and said fuel battery, for selecting reaction fuel to be supplied to said fuel battery and heating fuel to be supplied to said heating means,

said heating means using said heating fuel as fuel of said heating means, wherein

said heating means controls an amount of the supplied heat in order to heat the injected raw material to a target temperature indicated by a temperature control means by changing a supply ratio of unreacted fuel components from said fuel battery and exhaust substances from said fuel selecting means.

17. (Previously amended) An energy generating system according to claim 7, wherein

said heat engine is an internal combustion engine,

said energy generating system transferring a heat generated by said fuel battery to said internal combustion engine, or a heat generated by said internal combustion engine to said fuel battery,

said heating means heating the raw material to be injected to said internal combustion engine,

said energy generating system comprising a temperature control means for said internal combustion engine and said fuel battery,

said temperature control means controlling amounts of heat of said heat transfer means and said heating means and an amount of supplied fuel so that temperature in a reaction chamber of said internal combustion engine just before ignition may become a temperature above a self-ignition temperature of the raw material under an atmosphere in said reaction chamber,

said temperature control means controlling said amounts of heat of said heat transfer means and said heating means and said amount of supplied fuel so that temperature of fuel to be supplied to said fuel battery may become an operating temperature of said fuel battery.

18. (Previously amended) An energy generating system according to claim 17, wherein

said temperature control means comprises an internal combustion engine control means for controlling said internal combustion engine,

said internal combustion engine control means receiving an intake raw material temperature information transmitted from said temperature control means,

said internal combustion engine control means controlling said amount of produced fuel to be supplied to said fuel battery using selected data comprising an equivalent ratio, a compression ratio, a compression history, a cooling water temperature, a lubricant oil temperature, a lubricant oil pressure, and an intake gas flow rate.

19. (Previously amended) A vehicle mounting the energy generating system according to claim 7, which comprises

a motor for converting an electric power obtained from said fuel battery to a mechanical power, wherein

an output shaft of said motor and a mechanical power output shaft of said heat engine are connected to a wheel shaft through a mechanical transmission element.

20. (Previously amended) A vehicle mounting the energy generating system according to claim 7, which comprises

an electricity storing means for storing a direct current electric power obtained from said fuel battery, wherein

a mechanical power output shaft of said heat engine is connected to an electric generator,

an alternating current electric power obtained from said electric generator being converted to said direct current electric power by an alternating current electric power converting means to be stored in said electricity storing means,

said vehicle comprising a motor for driving said vehicle using the electricity stored in said electricity storing means,

an output shaft of said motor being connected to a wheel shaft through a mechanical transmission element.

21. (Previously amended) A vehicle according to claim 19, which comprises

an energy control means which receives a command signal of a driver and selected vehicle operational parameters and an internal state of said fuel battery as inputs, and controls a reaction composition control means and said electric generator and said motor based on said inputs.